

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method for the removal of silver from a cuprous chloride solution in a copper recovery process, comprising removing, in at least two stages, silver from a cuprous chloride solution with soluble mercury, using fine-grained copper, the method comprising:

feeding mercury into the solution at preselected stages in a preselected molar ratio to the silver in the solution;

precipitating a generated silver amalgam onto a surface of fine-grained copper;

removing the silver amalgam from the cuprous chloride solution for the separation of mercury and silver;

recycling soluble mercury back to silver removal; and treating the precipitated silver compound for the recovery of silver.

2. (previously presented) A method according to claim 1, wherein the molar ratio of mercury to silver in a first amalgam precipitation stage is 0.5– 2.

3. (previously presented) A method according to claim 1, wherein the molar ratio of mercury to silver in a second amalgam precipitation stage is at least 2.

4. (previously presented) A method according to claim 3, wherein the molar ratio of mercury to silver in the second amalgam precipitation stage is between 2 – 10.

5. (currently amended) A method according to claim 1, wherein the particle size of the fine-grained copper is less than 200 μm .

6. (previously presented) A method according to claim 5, wherein the amount of copper powder feed is in the range of 100 g/L.

7. (previously presented) A method according claim 1, further comprising feeding the copper powder to a mercury removal stage after silver removal stages, from which it moves countercurrently in relation to the solution flow.

8. (previously presented) A method according to claim 1, further comprising leaching the precipitated silver amalgam into a dilute chloride solution using an oxidant, whereby the mercury dissolves as mercury chloride and the silver precipitates as silver chloride.

9. (previously presented) A method according to claim 8, wherein the oxidant used is sodium hypochlorite.

10. (previously presented) A method according to claim 8, wherein the oxidant used is hydrogen peroxide.

11. (previously presented) A method according to claim 8, wherein the oxidant used is oxygen.

12. (previously presented) A method according to claim 8, further comprising routing the mercury chloride back to silver leaching.

13. (previously presented) A method according to claim 8, further comprising routing the silver chloride to silver recovery.

14. (previously presented) A method according to claim 8, wherein an alkali chloride content of the concentrated chloride solution is at least 200 g/L.

15. (previously presented) A method according to claim 1, wherein an amount of monovalent copper in the solution to be purified is 30 — 100 g/L.

16. (previously presented) A method according to claim 1, wherein silver removal is performed at a pH value of 1 - 5.

17. (previously presented) A method according to claim 1, further comprising removing silver from the cuprous chloride solution using fine-grained copper before amalgam precipitation occurs with mercury.

18. (currently amended) A method according to claim 17, wherein a particle size of the fine-grained copper is less than 200 μm .

19. (previously presented) A method according to claim 18, wherein the amount of fine-grained copper feed is about 100 g/L.